IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R. §1.121.

1. (currently amended) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry and terminals for an energy storage or filtering circuit;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between the terminals for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit;

at least one insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation.

2. (original) The bus system of claim 1, wherein the bus elements and the insulative layer form a laminate structure.

3. (original) The bus system of claim 1, further comprising at least one additional insulative layer disposed adjacent to the first or the second bus element for electrically isolating the bus element from adjacent components.

4. (original) The bus system of claim 1, wherein the first bus element and the insulative layer include recesses for accessing connection areas of the second bus element.

5. (original) The bus system of claim 1, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.

6. (original) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry and terminals for an energy storage or filtering circuit;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between a terminal for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit;

an inner insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another; and

first and second outer insulative layers disposed adjacent to the first and second bus elements, respectively, opposite the inner insulative layer, to electrically isolate the elements from other components;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation.

7. (original) The bus system of claim 6, wherein the bus elements and the insulative layers are contoured to conform to at least one support on which the power electronic switching circuitry and energy storage or filtering circuit are mounted.

8. (original) The bus system of claim 6, wherein the bus elements and the insulative layers form a laminate structure.

9. (original) The bus system of claim 6, wherein the first bus element and the insulative layers include recesses for accessing connection areas of the second bus element.

10. (original) The bus system of claim 6, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.

11. (original) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry and terminals for an energy storage or filtering circuit;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between a terminal for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit;

an inner insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another; and

first and second outer insulative layers disposed adjacent to the first and second bus elements, respectively, opposite the inner insulative layer, to electrically isolate the elements from other components;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation, and wherein the bus elements and the insulative layers form a laminate structure and are contoured to conform to at least one support on which the power electronic switching circuitry and energy storage or filtering circuit are mounted.

12. (original) The bus system of claim 11, wherein the first bus element and the insulative layers include recesses for accessing connection areas of the second bus element.

13. (original) The bus system of claim 11, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.

14.–30. (canceled).

31. (new) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry on a first side of a support and terminals for an energy storage or filtering circuit on a second side of the support;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between the terminals for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit; and

at least one insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation; and

wherein the bus system is disposed along an edge of the support between the first and second sides.

32. (new) The bus system of claim 31, wherein the bus elements and the insulative layer form a laminate structure.

33. (new) The bus system of claim 31, further comprising at least one additional insulative layer disposed adjacent to the first or the second bus element for electrically isolating the bus element from adjacent components.

34. (new) The bus system of claim 31, wherein the first bus element and the insulative layer include recesses for accessing connection areas of the second bus element.

35. (new) The bus system of claim 31, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.

36. (new) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry on a first side of a support and terminals for an energy storage or filtering circuit on a second side of the support;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between a terminal for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit;

an inner insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another; and

first and second outer insulative layers disposed adjacent to the first and second bus elements, respectively, opposite the inner insulative layer, to electrically isolate the elements from other components;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation; and

wherein the bus system is disposed along an edge of the support between the first and second sides.

37. (new) The bus system of claim 36, wherein the bus elements and the insulative layers are contoured to conform to at least one support on which the power electronic switching circuitry and energy storage or filtering circuit are mounted.

38. (new) The bus system of claim 36, wherein the bus elements and the insulative layers form a laminate structure.

39. (new) The bus system of claim 36, wherein the first bus element and the insulative layers include recesses for accessing connection areas of the second bus element.

40. (new) The bus system of claim 36, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.

41. (new) An electrical bus system comprising:

a first conductive bus element defining a first electrical reference plane extending substantially contiguously between a terminal for a first conductor coupled directly to power electronic switching circuitry on a first side of a support and terminals for an energy storage or filtering circuit on a second side of the support;

a second conductive bus element defining a second electrical reference plane extending substantially contiguously between a terminal for a second conductor coupled directly to the power electronic switching circuitry and the terminals for the energy storage or filtering circuit;

an inner insulative layer disposed intermediate the first and second bus elements to electrically isolate the elements from one another; and

first and second outer insulative layers disposed adjacent to the first and second bus elements, respectively, opposite the inner insulative layer, to electrically isolate the elements from other components;

wherein the first and second bus elements extend generally in parallel between the respective terminals to reduce parasitic inductance during operation, and wherein the bus elements and the insulative layers form a laminate structure and are contoured to conform along an edge of the support between the first and second sides.

42. (new) The bus system of claim 41, wherein the first bus element and the insulative layers include recesses for accessing connection areas of the second bus element.

43. (new) The bus system of claim 41, wherein the first and second bus elements include integral connection areas for electrically coupling the bus system to power electronic switching circuitry for three phases of ac power.